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EXAMINER

WOOD, WILLIAM H

ART UNIT	PAPER NUMBER
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2124

DATE MAILED: 04/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/764,564

Applicant(s)

VERMEIRE ET AL.

Examiner

William H. Wood

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-8 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-8 are pending and have been examined.

Drawings

1. The drawings submitted 09 February 2004 were accepted.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. New subject matter involves "*at least one memory reference*" found throughout the claims. Only one location in the originally filed disclosure mentioned "memory references" (page 9, line 20). This location does not discuss the method using memory references being claimed and it certainly isn't clear to what "memory reference" refers in relation to "associating".

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Newly amended limitations replacing a first and

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second reference with “at least one memory reference” are inconsistent with the totality of the claim language. For example, claim 1, lines 9-10 state “said at least one reference operating as **parameters** to allow...” (emphasis added). This is unclear, as one reference is not capable of being multiple parameters. Additionally, claim 1, line 8 states “and/or”, which is an unclear phrase. Thus, the claim language is interpreted as: “associating at least one memory reference to said name component or to said contents component of said data record layout, said at least one reference operating as a parameter to allow a programming interface to select said name component and said contents component from said data record layout in response to a data request”.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-3 and 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Hirao** et al. (USPN 6,442,749) in view of **Humpleman** et al. (USPN 6,546,419) and in further view of **Purple** (USPN 6,252,587).

In regard to claim 1, **Hirao** disclosed the limitations:

- ♦ *A method for translating the contents of a binary data record existing in a programming language (column 1, lines 6-17; column 2, lines 3-7 and 28-42) comprising the steps of:*

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- ♦ (a) determining a data record layout of a binary data record in an architecture-specific program (*column 2, lines 4-6 and lines 10-12; column 3, line 65 to column 4, line 3; layout of component's data needed in order for wrapper to be effective*),
- ♦ (c) *modifying said architecture-specific program* (column 1, lines 61-63; column 2, lines 13-27; column 4, lines 4-19; program/component is modified to include an intermediating conventional wrapper, not citing script wrapper)

Hirao did not explicitly state the limitations: *said data record layout comprising a name component and a contents component; (b) associating at least one memory reference to said name component or to said contents component of said data record layout, said at least one reference operating as a parameter to allow a programming interface to select said name component and said contents component from said data record layout in response to a data request; and to include at least one memory reference for use by said programming interface.* **Humpleman** demonstrated that it was known at the time of invention to provide references to name components and contents components (column 18, lines 48-51, some memory reference being accessed via associated name and contents components) in order to allow a programming interface access to data requested. It would have been obvious to one of ordinary skill in the art at the time of invention to implement a system of using a wrapper of data layouts for bridging data from separate components as found in **Hirao** with an XML intermediate data format using references to name and contents as found in **Humpleman's** teaching and thus producing a system of a wrapped component, wherein the wrapper uses the references

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to name and content to fill out an XML document. This implementation would have been obvious because one of ordinary skill in the art would be motivated to provide a generic data format for components of differing conventions to communicate (XML's purpose is for sharing information; and **Hirao** indicates using XML as an intermediate data structure, column 7, lines 20-23).

Hirao did not explicitly state *(d) generating source code for a software component of an object-oriented programming system, said software component being adapted to send to said programming interface said data request for the content of said binary data record associated with said reference, and said software component being adapted to receive from said programming interface a response to said data request*. **Purple** demonstrated that it was known at the time of invention to generate object code (column 2, lines 39-63; column 8, lines 54-62) for communicating legacy data. It would have been obvious to one of ordinary skill in the art at the time of invention to implement the above conventional wrapper communicating in/out data through XML system of **Hirao** and **Humpleman** with generating an object-oriented component for communicating the legacy data as suggested by **Purple**'s teaching. This implementation would have been obvious because one of ordinary skill in the art would be motivated to allow commonly known (object-oriented) software components to communicate with older software (clearly aids in compatibility and system maintainability).

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Hirao did not explicitly state to compile generated source code into binary. However, **Hirao** demonstrated that it was known at the time of invention to compile wrappers/code (column 4, lines 13-15; and column 5, lines 3-10). It would have been obvious to one of ordinary skill in the art at the time of invention to implement the wrapping/translation system of **Hirao** with compiling the code as found in **Hirao**'s teaching. This implementation would have been obvious because one of ordinary skill in the art would be motivated to provide wrappers, which are harder to be corrupted by individuals and fast in execution compared with scripts (though the cited portions of **Hirao** indicate the advantages of scripts, generally the opposite benefits are found in compiled code).

In regard to claim 2, **Hirao**, **Humpleman** and **Purple** disclosed the limitation *wherein said identifying step further comprises translating the source code of said architecture-specific program to a language-neutral representation including the hierarchical structure of said architecture-specific program* (**Purple**: Figure 2, hierarchical structure).

In regard to claim 3, **Hirao**, **Humpleman** and **Purple** disclosed the limitation *wherein said associating step further comprises a published programming interface to allow multiple programming languages to connect with an interprocess communications mechanism to deliver said name component of said record layout and an architecture-specific binary data record to said software component* (**Hirao**: column 2, lines 3-6, API).

In regard to claim 5, **Hirao**, **Humpleman** and **Purple** disclosed the limitation *wherein an architecture-specific program source code (having a data element) is parsed to create a language neutral representation of said data element where the result of the parsing is stored in a persistent storage medium such as a relational database or a file system* (**Hirao**: disclosed XML and **Humpleman**: disclosed XML).

In regard to claim 6, **Hirao**, **Humpleman** and **Purple** did not explicitly state the limitation *wherein said generating step further comprises dynamically invoking a compiler to convert said source code of said software component into a binary form*. Official Notice is taken that it was known at the time of invention that java uses just-in-time compiling (dynamic). It would have been obvious to one of ordinary skill in the art at the time of invention to dynamically compile the source code generated by **Purple**'s teachings. This implementation would have been obvious because one of ordinary skill in the art would be motivated to utilize commonly known and well understood Java programming techniques.

In regard to claim 7, **Hirao**, **Humpleman** and **Purple** did not explicitly state the limitation *further comprising a software to load said generated binary form into memory for use*. Official Notice is taken that it was known at the time of invention to load applications or other programs. It would have been obvious to one of ordinary skill in the art at the time of invention to load a binary of an application to be executed. This implementation

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would have been obvious because one of ordinary skill in the art would be motivated to utilize a common technique for preparing stored programs for execution.

In regard to claim 8, **Hirao**, **Humpleman**, and **Purple** did not explicitly state *wherein said compiling step is performed dynamically*. Official Notice is taken that it was known at the time of invention to utilize just-in-time compilation, such as by Java. It would have been obvious to one of ordinary skill in the art at the time of invention to implement the above wrapper/translation system of **Hirao**, **Humpleman** and **Purple** with JIT of a java language or any language. This implementation would have been obvious because one of ordinary skill in the art would be motivated to provide compilation only when necessary (compilation being an expensive operation or to facilitate the Java Virtual Machine).

Allowable Subject Matter

8. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of allowable subject matter: claim 4 includes limitations not found or reasonably suggested by the cited prior art of record. Specifically, *wherein said modifying step further comprises a base component from which generated source code can be derived using object oriented inheritance language constructs* is not disclosed by **Hirao** or found in a combination of **Hirao** with **Humpleman** and **Purple**.

Response to Arguments

9. Applicant's arguments filed 09 February 2004 have been fully considered but they are not persuasive. Applicant argued the prior art failed to disclose: ¹⁾ that the reference to the name component and the contents component of the data record is a memory reference that operates as parameters to allow a programming interface to select the name component and the contents component; and ²⁾ a method that takes a snapshot of the in-memory binary data as it exists in the architecture-specific environment as it is being processed. Neither of these arguments is persuasive. As to the first issue, the adjusted rejection above addresses the memory reference. As to the second issue, Applicant's argument concerning a snapshot is entirely unclear. The claim does not seem to follow this terminology and the above references have been shown to map to the language of the claims. Thus, the rejections are maintained.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Correspondence Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Wood whose telephone number is (703)305-3305. The examiner can normally be reached 7:30am - 5:00pm Monday thru Thursday and 7:30am - 4:00pm every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (703)305-9662. The fax phone numbers for the organization where this application or proceeding is assigned are (703)746-7239 for regular communications and (703)746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

William H. Wood
March 31, 2004

Kakali Chaki

**KAKALI CHAKI
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